

# How to Start and Maintain an Oyster Garden

## Step Three: Choose a Containment System

A wide range of options is available for maintaining oysters off the bottom. Methods include the use of floats, suspended mesh bags and fixed bottom racks or cages. No single method is right for everyone, and no single method guarantees success. Each grower must consider characteristics of the growing site and his or her ability to handle the weight of the containers. Several options are offered here and a number of different modifications of these systems may be commercially available. See pages 9 and 21 for more information and contacts. Oyster gardeners have been quite inventive in devising containers and methods that work for them. You should feel free to experiment with modifications and methods to make gardening easier for you, given your particular site. The important thing to remember is that your system must provide:

- 1) adequate predator protection,
- 2) minimal flow obstruction, and
- 3) ease of maintenance and handling.

### Taylor float



*Taylor floats can be attached to lines so they can be hauled more easily onto a dock or pier for maintenance. Photo by Kathy Hoffman.*

The Taylor float (named after its designer, Jake Taylor) is a containment system that holds oysters about one foot under the surface of the water. The Taylor Float has a sturdy, relatively open design that provides limited surface area for fouling and permits good water flow. Disadvantages include the cumbersome size (some are

as large as 2' x 8') and the possible need for a hoist to retrieve the floats when they are full of oysters. A 2' x 3' Taylor float will hold about 500 adult oysters. Taylor floats can be tied under a dock or pier which keeps them out of the sun and helps slow the accumulation of algae on the float and the oysters.

Taylor floats are generally constructed with a 2' x 3' frame of 4 inch PVC pipe and a one inch by one inch mesh marine plastic coated wire basket. Plastic coated wire is best for reducing corrosion and extending the life of the float. ½ " plastic mesh bags holding smaller oysters are laid into the float and can be turned over every couple of weeks. As the size of the oysters increases, the mesh size of the bags should also be increased and the densities of oysters reduced.

For extra protection against predators, a ½ inch mesh liner made of thin plastic (often sold as bird netting to protect fruit trees) may be placed within the float and attached to it with cable ties. For a 2' X 3' Taylor float, cut 3 ft x 4 ft sections and secure it to the inside of the float. The liner should extend 6 inches up the sides of the float and be secured at the top with the cable ties. The liner may protect against predators, but may slow water flow through the float.

Larger oysters can be placed directly into the floats, but the float may need a lid to keep out predators. Lid options for this float include ¼ inch thick plywood lids, wire mesh, and shade cloth. Performance of different lid options varies with location, and opinions about the best type of lid vary among oyster gardeners. Lids can restrict the growth of macro algae in the floats and reduce predation by otters and seagulls. However, barnacle and oyster settlement may be greater on lids, and seagulls roosting on top of the lids may cause elevated fecal coliform bacteria levels.

The Tidewater Oyster Gardeners Association holds workshops each year at which gardeners are taught to build their own float. (Directions for building the float may be found at [www.oystergardener.org](http://www.oystergardener.org).)



*Gardeners devise ways of lifting floats up to the dock for cleaning and maintenance. Small cranes, boat lifts, even jet-ski lifts may be adapted for this purpose. Photo courtesy of TOGA.*

## Mesh bags

A less expensive oyster garden, illustrated in the photo below, consists of ADPI marine plastic mesh bags, each containing about 150 oysters. The bags are kept afloat by four, empty, one-liter soda bottles. Multiple bags are lined up with a rope running through the middle of each bag and attached at each end to a piling or stake. Running a rope through the middle of the bags allows them to be flipped end to end every week or so, to help keep them clean. Fouling organisms tend to grow on the bottom side, so when the bags are flipped, that side is exposed to sun and air which will kill off most of the fouling organisms.

Gardeners in locations where the water may freeze in winter will need to sink the bags by filling the soda bottles with water, or by other means, to prevent freezing. The mesh bags may also be placed on racks constructed of steel reinforcing bar (rebar). This "rack and bag" method generally involves securing bags with oysters onto racks that extend 1 – 2 feet above the bottom. Bags may be purchased from commercial suppliers or made with 1/8", 3/16", and 5/8" mesh size openings. The bags are closed with 4 inch cable ties or using a combination of 1/2" stainless steel hog rings and cable ties.



*Photos by courtesy of TOGA.*

## Cages

Bottom racks or cages are useful in places where the bottom is hard and wave action is too great for surface



*Photo courtesy of TOGA by Preston Philyaw.*

floats to work. They may also be preferred in shallow waters where aesthetics are a consideration and you don't want the oyster

garden to be visible. These cages are commercially available or may be constructed. They sit on feet that are 8 inch to 12 inch high and must have a lid to protect oysters from predators. These cages full of adult oysters can be quite heavy, and this should be kept in mind when purchasing or building them.



*Photo courtesy of TOGA.*

Small baskets (Australian cages), as in the photo above, are also commercially available. These hold around 100-150 mature oysters. They may be fastened to long lines, or suspended in the water by a PVC pipe sealed at both ends and hung from a dock. A distinct advantage of these cages is that they are not as heavy to lift out of the water to clean or maintain compared to those described above. On the other hand, they don't hold very many oysters.